Product Manual

Titanium-Based Adsorbent for Li Extraction HPL910

Version Number：HPPM-Li-T202602

For more information, please follow WeChat ID

Catalog

1. Product Description

1.1 Product Introduction

The HPL910 series is the latest generation (3rd generation) of high-capacity, high-selectivity titanium-based lithium extraction adsorbent for salt lake brine, independently developed by Jiangsu Haipu Functional Materials Co., Ltd. It features the following advantages:

1) Prepared via nanohybridization, ion imprinting and other technologies, the HPL910 series adsorbent possesses abundant nanochannels and active nanocrystal particles, delivering high-efficiency adsorption and enrichment performance for lithium ions. Even when the lithium ion concentration in the feed solution is as low as 100 mg/L, it can be enriched to over 1500 mg/L after single adsorption.

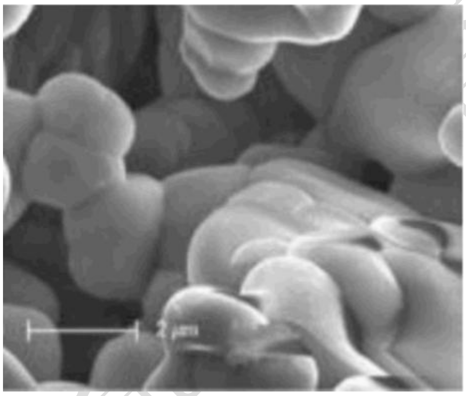


Figure 1-1 Adsorbent Microstructure

2) The new generation of nano-scale powder pore-forming process optimizes adsorption kinetics, ensuring abundant nanochannels and active nanocrystal particles inside the adsorbent, which significantly increases the lithium diffusion rate. While improving adsorption capacity, it reduces the influence of temperature on adsorption efficiency, enabling the material to maintain excellent performance even in low-temperature environments. The adsorption rate remains at a high level under decreasing temperature conditions.

3) The adsorption sites exhibit a memory effect toward lithium ions. Even in salt lake brine or lithium-containing feed solution where the content of alkali metal ions and alkaline earth metal ions is 100 times or even 1000 times that of lithium ions, the material still maintains high selectivity for lithium and can efficiently separate lithium from impurity ions such as sodium and magnesium. After a single adsorption and separation process, the lithium-to-sodium ratio in the desorption solution can be greater than 2, and other impurity ions such as magnesium and potassium can be reduced to much lower levels.

4) Spheroidized granulation ensures excellent hydraulic flow characteristics. Polymers are incorporated to deliver superior erosion resistance and stable physicochemical properties, guaranteeing outstanding mechanical strength and toughness. The adsorbent features low attrition rate, strong acid resistance, and an annual performance degradation rate of less than 10%. It is resistant to caking and clogging, effectively eliminating frequent shutdowns for backwashing and ensuring stable production.

5) The lithium extraction process is green and environmentally friendly. Only lithium ions are adsorbed from the feed solution, with no other chemical elements introduced, allowing the treated solution to be directly discharged back to the salt lake or transferred to the next process stage. Desorption can be achieved using acid at a concentration of 0.5 mol/L or lower, ensuring safety and energy efficiency.

1.2 Technical Parameters

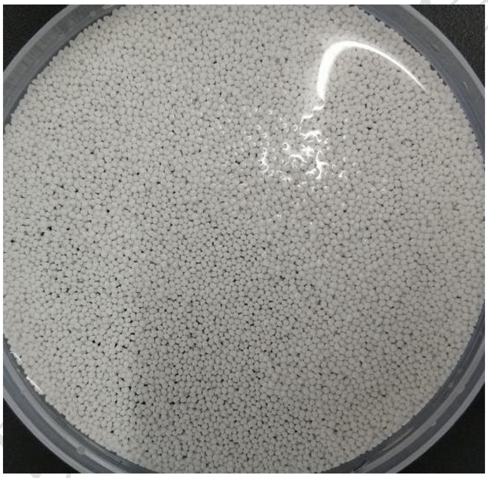


Figure 1-2 Appearance of HPL910 Series

Table 1-1 Technical Parameters of The HPL910 Series

Items	Units	Parameters
Appearance	/	White to milky white ellipsoidal particles
Wet Bulk Density	g/mL	0.90~1.20
Dry Bulk Density	g/mL	0.55~0.75
Physical Strength	%	≥ 98.0
Particle Size Range	mm	0.5 ~ 1.5
Saturated Lithium Adsorption Capacity	g/L	≥ 12.0
Annual Loss Rate	%	≤ 15.0

Service Life	Year	≥ 5
Operation pH Range	/	7.5~14.0
Operation Temperature Range	℃	-10~80

Remark: The lithium extraction process generally has certain requirements for lithium recovery rate. Therefore, the actual working adsorption capacity is determined by the feed solution grade and process specifications. For salt lake brine with a lithium concentration of 400 mg/L, the working adsorption capacity is approximately 4.0 g/L under a 90% recovery rate using the continuous ion exchange process.

1.3 Application Scenarios

The HPL910 series titanium-based adsorbents are mainly suitable for slightly alkaline lithium-containing liquid:

1) Natural brines, such as raw salt lake brine, old brine, oil/gas field associated brine, geothermal brine, etc.

2) Lithium-containing liquid produced during lithium battery recycling or other production processes.

3) Lithium precipitation mother liquid generated in the lithium carbonate production process.

The adsorption mechanism of titanium-based lithium extraction adsorbents is based on ion exchange between H^+ and Li^+.Therefore, the feed solution is required to maintain a certain alkalinity during adsorption.It is preferable to contain a certain amount of alkaline buffer ions, such as HCO_3^-/CO_3^{2-}, to ensure optimal adsorption performance.

1.4 Storage Methods

The HPL910 series titanium-based adsorbent is produced by a wet granulation process and contains a certain amount of moisture. It shall be stored in a normal temperature and humid environment to avoid structural damage caused by drying or freezing. Used adsorbent that has been tested shall be stored in brine with a certain salt content.

2. Product Testing

2.1 Testing Description

1) Single-column Test

This test is the simplest and most practical method to verify the adsorbent performance and compatibility with the target feed solution, allowing rapid acquisition of adsorption/desorption performance parameters of the adsorbent for the feed solution. In addition to the special adsorption column shown in the figure below, a jacketed chromatography column can also be used.

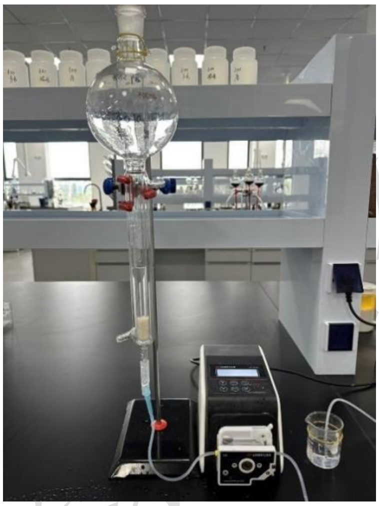


Figure 2-1 Single-column Device

2) Multi-column Test

After preliminarily evaluating the adsorption and desorption performance of the adsorbent for the feed solution through single-column tests, multi-column tests can be carried out to simply simulate the adsorption process for industrial production.

Titanium-based adsorbents generally adopt a three-column test mode. The first two columns are connected in series for adsorption in a single cycle (with the adsorption volume being the breakthrough volume obtained from the single-column test). Then the first column is subjected to desorption and regeneration, after which it becomes the last column. The original second adsorption column becomes the first column and is connected in series with the next column to continue adsorption, and the cycle repeats.

Through the simple simulation of multi-column tests, some key parameters for industrial production can be roughly obtained, such as feed solution processing capacity, qualified solution output, and qualified solution specifications, which provide certain guidance for the industrial production of the adsorption section.

Figure 2-2 Double-column Device

3) Small-scale Continuous Bed Test

To fully simulate the continuous bed process of the adsorption section, our technical personnel can further carry out small-scale continuous bed tests at the customer's site using professional equipment. The equipment consists of 30 exchange columns equipped with multiple peristaltic pumps, allowing multi-stage series and parallel connection of the columns via adjustable pipelines to fully simulate the continuous operation of adsorption, washing and desorption. This test can obtain parameters close to actual production, highly simulate the industrial production process of the adsorption section in lithium extraction projects, and provide crucial guidance for the process design and optimization of the entire lithium extraction project.

Figure 2-3 Continuous Ion-exchange Device

2.2 Testing Methods

1) Cleaning

After receiving the product and checking the integrity of the package, pour a portion of the adsorbent into a container and rinse it with an appropriate amount of pure water until the washing water becomes relatively clear.

2) Column Filling

Take an appropriate amount of adsorbents (no less than 10mL, height-to-diameter ratio approximately 3) and load them into the adsorption column. Compact with pure water, connect the peristaltic pump, and drain the residual pure water from the column. Connect the constant-temperature water bath.

3) Activation

Add 5 BV (Bed Volume) of 1% HCl (the anion in the acid depends on the product). Perform cyclic desorption and activation at 40℃ with a flow rate of 12BV/h for approximately 1h. During the cycle, check the pH of the desorption solution every 10 minutes. If the pH rises above 5, supplement an appropriate amount of concentrated acid until the pH remains stably below 5. After completion, drain all acid solution, then rinse residual acid on the adsorbent surface with 6BV of pure water at 12BV/h. The activation process is finished, which removes lithium introduced during adsorbent production and ensures optimal test performance.

4) Adsorption

Prepare 10BV to 40BV of filtered feed solution. Adjust the peristaltic pump to control the feed solution at a flow rate of 1BV/h - 10BV/h for adsorption treatment, and collect the effluent.

Determine the adsorption breakthrough volume by sampling the adsorption effluent every 0.5h, plot the adsorption curve, and calculate the adsorption capacity. Meanwhile, monitor the pH of the adsorption effluent. A rapid drop in pH or acidic conditions indicates insufficient alkalinity in the feed solution, which may impair adsorption performance, and pH adjustment of the feed to a higher value is recommended.

Taking feed solution with a lithium ion concentration of 400mg/L as an example:

- Adsorption volume: 20BV
- Adsorption flow rate: 5BV/h

For feed solutions with higher lithium concentration, the adsorption volume and flow rate can be appropriately reduced; for lower lithium concentration, they can be appropriately increased.

5）Desorption

① After adsorption, rinse with 6BV of room-temperature pure water at 12BV/h to remove impurity ions attached to the adsorbent surface.

② Neutralize residual alkalinity in the feed solution with 0.5BV of 1% HCl (anion in the acid depends on the product) at 10BV/h, until the effluent becomes neutral.This step is optional and only required when the feed solution has extremely high alkalinity (pH≥12).

③ Perform cyclic desorption and activation with 2.5BV of 1% HCl (anion in the acid depends on the product) at 40℃ and 12BV/h for approximately 1h. During cycling, check the pH of the desorption solution every 10 min. If the pH rises above 5, supplement concentrated acid until the pH remains stably below 5. After desorption, drain and collect the desorption solution, measure the average lithium concentration, and calculate the total desorbed lithium. Desorption solution samples can also be collected to plot the desorption curve.

If a large amount of lithium has been adsorbed, incomplete desorption may occur, indicated by a rapid pH rise to around 7. In this case, simply increase the dosage of desorption acid appropriately.

④ After desorption, rinse the adsorbent with 6BV of room-temperature pure water at 12BV/h to remove residual acidity, completing reactivation of the material.

2.3 Relevant Calculation Methods

1) **Volumetric Adsorption Capacity ($Q_{adsorption}$, g/L)** is used to evaluate the adsorption capacity of the adsorbents for lithium ions in brine, calculated as follows:

$$Q_{adsorption}=\frac{(c_{brine\ before\ adsorption}-c_{brine\ after\ adsorption})\times V_{adsorption}}{V_{loading}}$$

$c_{brine\ before\ adsorption}$: lithium ion concentration in the feed solution (g/L)

$c_{brine\ after\ adsorption}$: lithium ion concentration in the tail brine (g/L)

$V_{adsorption}$: volume of the feed solution for adsorption (L)

$V_{loading}$: loading bed volume of adsorbents (L)

2) **Volumetric Desorption Capacity ($Q_{desorption}$)** is used to evaluate the desorption performance of the adsorbents, calculated as follows:

$$Q_{desorption}=\frac{(c_{liquid\ after\ desorption}-c_{liquid\ before\ desorption})\times V_{desorption}}{V_{loading}}$$

$c_{liquid\ before\ desorption}$: lithium ion concentration in desorption influent (g/L)

$c_{liquid\ after\ desorption}$: lithium ion concentration in desorption effluent (g/L)

$V_{desorption}$: volume of the feed solution for desorption (L)

$V_{loading}$: loading bed volume of adsorbents (L)

When the desorption process includes steps①, ② and ③, the total desorption capacity is the sum of the desorption capacities obtained of these three steps.

3) **Desorption Rate (ω)** reflects the adsorption/desorption stability of the adsorbents. The normal desorption rate should be around 100%, calculated as follows:

$$\omega=\frac{Q_{desorption}}{Q_{adsorption}}\times 100\%$$

4) **Impurity Ratio of Desorption Solution (η)** is used to characterize the impurity separation performance of the adsorbents, typically including Na/Li ratio and Mg/Li ratio, calculated as follows:

$$\eta=\frac{c_{impurity\ ions}}{c_{Li\ ions}}$$

$c_{impurity\ ions}$: concentration of impurity ions in desorption solution (g/L)

$c_{Li\ ions}$: concentration of Li ions in desorption solution (g/L)

2.4 Other Precautions

1) At the time of manufacture and delivery, the adsorption sites of the lithium extraction adsorbents are fully occupied by lithium ions. Therefore, sufficient activation is required to remove this lithium before the adsorbents can achieve its full adsorption performance.

2) Due to the complex composition of brine, it is generally necessary to conduct repeated tests for 2 to 3 batches to allow the adsorbents to adapt to the brine environment, after which the performance will become excellent and stable.

3) If the adsorption/desorption performance of the adsorbent is unsatisfactory, please contact our company in a timely manner. We will promptly provide adjustment suggestions or dispatch technical personnel to the site to assist with experiments and testing. At the same time, it is recommended to send a

portion of the feed solution to our R&D center in Suzhou for testing, after which we will provide a detailed test report.

4) In industrial production for lithium extraction projects, the continuous ion exchange process is usually adopted for higher efficiency and lower material consumption. Under this process, the adsorbent performance can be effectively improved: the adsorption/desorption capacity will be higher than that in single-column and multi-column tests, and the impurity ions in the qualified solution can also be effectively controlled at a low level.

3. Haipu Introduction

3.1 Company Overview

Founded in 2013, Jiangsu Haipu Functional Materials Co., Ltd. is a Chinese national high-tech enterprise specializing in the provision of new materials and intelligent equipment for separation and purification in the fields of energy metals, nuclear industry, resource & environmental protection, and pharmaceutical & healthcare.

We focus on the R&D and application of separation and purification technologies, and have launched a series of products and solutions with independent intellectual property rights for scenarios including metal extraction and recycling, green development of nuclear industry, hydrometallurgy, resource & environmental protection, natural product extraction, and pharmaceutical separation & purification, so as to meet the diverse demands of different customers.

Adhering to the original aspiration of 'Driving new quality productivity through material innovation', Haipu solves technical challenges through source-level and fundamental innovation. We closely follow market demand, provide dedicated services to customers, and continuously optimize and upgrade our products, helping customers reduce costs, improve quality and enhance efficiency.

Core team of Haipu consists of doctors and masters from world-leading enterprises and prestigious universities, including Dow Chemical, General Electric, Nanjing University, and The Chinese University of Hong Kong, with extensive experience in independent material R&D and project implementation. The company has applied for more than 100 invention patents. Key members of the founding team received awards including the 7th Suzhou Industrial Park Leading Talent Award (2013), the Gusu Leading Talent

Award (2015), the 9th Suzhou Industrial Park Leading Talent Award (2015), and the Jiangsu Province Education, Teaching and Research Achievement Award (2018). The company has been successively recognized as a National High-Tech Enterprise. It was approved as the Suzhou Engineering Technology Research Center for Adsorption and Catalysis Functional Nanomaterials in 2018, designated as a Gazelle Enterprise by Suzhou Industrial Park and Suzhou City in 2019 and 2020 respectively, and selected as a Listed Nursery Enterprise of Suzhou Industrial Park in 2020. In 2023, Haipu established two provincial-level platforms: the Jiangsu Engineering Technology Research Center for Adsorption and Extraction of Salt Lake Brine Resources and a Jiangsu Provincial Specialized, Sophisticated, Unique, and New Enterprise. In 2024, it was accredited as a National Specialized, Sophisticated, Unique, and New Little Giant Enterprise, and in 2025, it was recognized as a Jiangsu Provincial Gazelle Enterprise.

Haipu emphasizes technological innovation as well as quality, environmental, and occupational health & safety management. The company has passed the certifications of ISO 9001 Quality Management System, ISO 14001 Environmental Management System, and ISO 45001 Occupational Health and Safety Management System, ensuring the provision of reliable, high-performance products and professional services to customers.

Since 2022, Haipu has completed several rounds of financing totaling hundreds of millions of Chinese yuan. In October 2023, Zijin Mining became a strategic investor and the second-largest shareholder of Haipu.

Zijin Mining is a leading global mining group primarily engaged in the exploration and development of gold, copper, zinc, and other metal mineral resources. The company is dual-listed on the Shanghai Stock Exchange (601899.SH) and the Hong Kong Stock Exchange (2899.HK).

In the Forbes Global 2000 2025 list—ranked comprehensively by revenue, profit, assets, and market capitalization—Zijin Mining ranks 1st among all listed gold companies worldwide and 4th among global metal mining enterprises. It is one of China’s most profitable, resource-rich, and competitive large-scale mining companies.

3.2 Technical Heritage

Jiangsu Haipu Functional Materials Co., Ltd. is a Chinese national high-tech enterprise specializing in providing separation and purification materials as well as intelligent systems and equipment for the energy metal sector. Since its establishment, the company has upheld profound scientific research heritage and a spirit of innovation, committed to intensive development in the field of materials science.

Dr. Cai Jianguo, the founder of Haipu, serves as an Industrial Professor at Nanjing University and a part-time researcher at the Nanjing University Suzhou High-Tech Research Institute. He has applied for more than 80 domestic and international patents and published over 20 academic papers. He was formerly a Senior Researcher at The Dow Chemical Company (US) and at the National Engineering Research Center for Organic Toxic Pollutant Control and Resource Reuse.

Dr. Cai Jianguo studied under Academician Zhang Quanxing, one of the **main pioneers in the development of ion exchange and adsorption technology in China**. Academician Zhang was elected as a member of the Chinese Academy of Engineering in 2007. He is a Professor and Ph.D. supervisor at the School of the Environment, Nanjing University, and Director of the National Engineering Research Center for Organic Toxic Pollutant Control and Resource Reuse.

Academician Zhang Quanxing studied under Academician He Binglin, known as **the Father of Chinese Ion Exchange Resins**. Academician He was the founder of China’s ion exchange resin industry, a senior member of the Chinese Academy of Sciences, and recipient of the **Lifetime Achievement Award** from the Chinese ion exchange resin industry.

Academician He Binglin　　Academician Zhang Quanxing

3.3 Patents, Honors & Qualifications

Over more than ten years since its establishment, Haipu has consistently adhered to technological innovation and independent R&D. More than 200 functional materials have been developed to meet diverse customer needs. The company continues to focus on the functional materials sector, with full-chain R&D and delivery capabilities spanning from laboratory testing to large-scale industrial application. It has actively expanded into the energy metals, pharmaceutical & healthcare, nuclear industry, and resource & environmental protection industries, aiming to provide innovative products and solutions for the materials science field.

The company is recognized as a Suzhou Intellectual Property Growth Enterprise. It currently holds more than 100 invention patents. Some of its products have broken foreign technological monopolies, filled domestic gaps, and reached industry-leading levels in relevant technical fields.

Haipu has taken the lead in formulating and officially issuing two standards:

Technical Specification for Lithium Extraction from Salt Lake Brine by Adsorption-Membrane Separation.

Aluminum-Based Molecular Sieve Adsorbents for Lithium Extraction from Salt Lake Brine.

These two standards aim to promote the standardization and normalization of lithium extraction technologies from salt lake brine using adsorption-membrane separation, upgrade the overall industry level, and facilitate the efficient utilization and sustainable development of mineral resources.

Since its founding, Haipu has remained committed to technology-driven innovation and achieved remarkable milestones.

In the early years (2013–2015), the company was successively selected for the Suzhou Jinji Lake Leading Talent Program and Gusu Leading Talent Program, and was recognized as a Jiangsu Private Science & Technology Enterprise and Jiangsu Science & Technology SME, laying a solid foundation for innovation.

In 2018, we successfully passed the re-certification as a National High-Tech Enterprise and established the Suzhou Engineering Technology Research Center, with our R&D capabilities officially recognized.

Since then, the company has entered a rapid growth stage. In 2020, we were awarded Suzhou Gazelle Enterprise and Suzhou Industrial Park Listed Nursery Enterprise, demonstrating strong growth potential.

In recent years, our industry status and comprehensive strength have reached new heights. We have been approved to establish the **Jiangsu Engineering Technology Research Center for Adsorption and Extraction of Salt Lake Brine Resources**, awarded **Jiangsu Provincial Specialized, Sophisticated, Unique and New Enterprise** and the highly prestigious **National Specialized, Sophisticated, Unique and New Little Giant Enterprise**. In 2025, we received the honor of **Jiangsu Provincial Gazelle Enterprise**.

These honors witness outstanding growth of Haipu from a technology-based enterprise to an industry leader.

Honor List of Haipu

1) 2013 Jinji Lake 100 Talent Program – Science & Technology Leading Enterprise (Entrepreneurship)
2) 2015 Jinji Lake 100 Talent Program – Science & Technology Leading Enterprise (Innovation)
3) 2015 Gusu Innovation & Entrepreneurship Leading Talent Enterprise
4) 2014 Jiangsu Private Science & Technology Enterprise
5) 2014 Jiangsu Science & Technology SME
6) 2018 Re-certified National High-Tech Enterprise

7) 2018 Suzhou Engineering Technology Research Center for Adsorption and Functional Nanomaterials

8) 2018 Third Prize of Jiangsu Province Education, Teaching and Research Achievement Award (Research)

9) 2014 Jiangsu Technological Innovation Fund for Science & Technology Enterprises – Project Approved in Science & Technology Parks, Successfully Accepted in 2018

10) 2019 ISO 9001, ISO 14001, ISO 45001 Management System Certifications

11) 2020 Suzhou Gazelle Enterprise

12) 2020 Suzhou Industrial Park Listed Nursery Enterprise

13) 2023 Jiangsu Engineering Technology Research Center for Adsorption and Extraction of Salt Lake Brine Resources

14) 2023 Jiangsu Provincial Specialized, Sophisticated, Unique and New Enterprise

15) 2024 National Specialized, Sophisticated, Unique and New Little Giant Enterprise

16) 2025 Jiangsu Provincial Gazelle Enterprise


高新技术产品认定证书
产品名称：高比表面积两性吸附树脂
产品编号：17GX08G2754N
承担单位：江苏海普功能材料有限公司
江苏省科学技术厅
有效期伍年


获奖证书
为表彰 2018 年江苏省教育教学与研究成果奖（研究类）
获奖者，特颁发此证书，以资鼓励。
江苏省教育厅


姑苏创新创业领军人才
苏州市人民政府
二〇一五年七月


高新技术企业
江苏省科学技术厅 江苏省财政厅 国家税务总局江苏省税务局
二〇二四年十一月


苏州市
吸附与催化功能纳米材料工程技术研究中心
苏州市科学技术局
二〇一八年


上市苗圃
江苏海普功能材料有限公司
苏州工业园区管理委员会
2020年9月


SIP
瞪羚企业
苏州工业园区管理委员会
二〇一九年

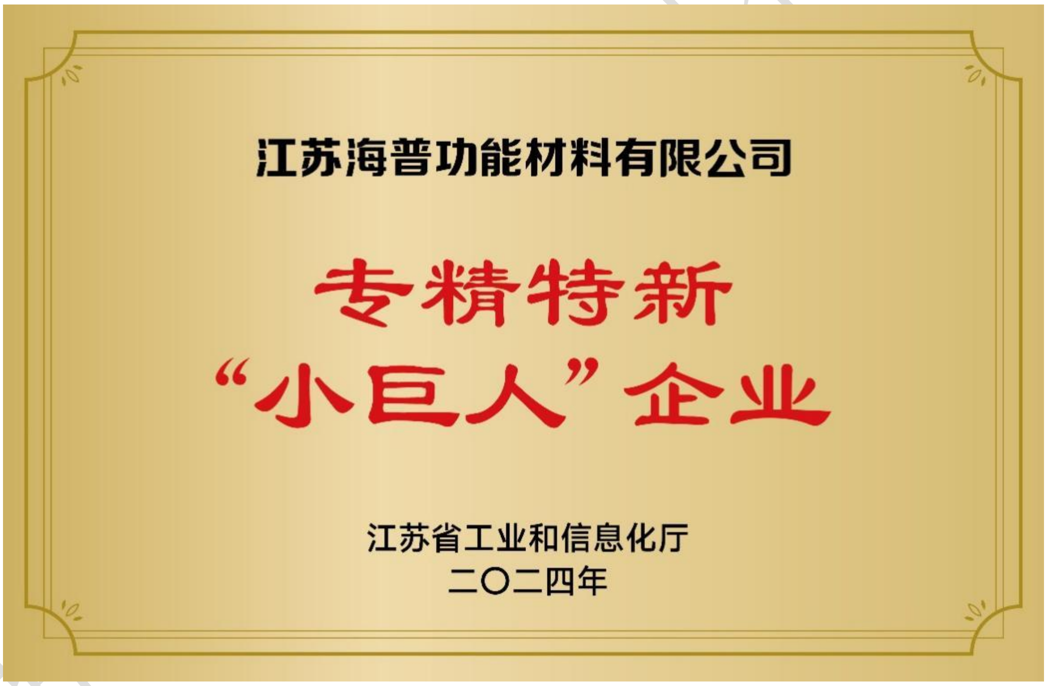

二〇二〇年度
瞪羚企业
苏州市科技局
二〇二〇年十月


江苏省科技型中小企业
企业名称：江苏海普功能材料有限公司
证书编号：143205Y7KJQY000067


JSPTE
江苏省民营科技企业
Jiangsu Private Science&Technology Enterprise
二〇二四年九月


江苏省盐湖卤水资源吸附提取
工程技术研究中心
江苏省科技厅 江苏省财政厅
二〇二三年


江苏海普功能材料有限公司
江苏省专精特新中小企业
江苏省工业和信息化厅
二〇二三年



3.4 R&D Center

Haipu has a total R&D center area of 5,000 m², including:

1,000m² new product laboratory, focusing on R&D and testing related to the company’s core materials, such as the development of new materials and performance optimization of existing materials.

1,800m² application R&D and pilot workshop, mainly conducting R&D tests for customer projects, including material selection for customer samples, process and parameter design, and treatment performance verification tests.

Haipu R&D Center (Suzhou, China)

3.5 Production Bases

Haipu production bases are located in Panji Economic Development Zone, Huainan City, Anhui Province. The company owns two production bases: **Anhui Bopu Nano New Materials Co., Ltd.** and **Anhui Bochang Intelligent Equipment Co., Ltd.**, both of which are wholly-owned subsidiaries of Haipu.

The company boasts strong production capacity:

- **Special ion-exchange resin**: annual output of 36,000 m³
- **Ion-exchange membrane**: annual output of 1,000,000 m²
- **Intelligent equipment workshop**: 5,000 m²

Equipped with advanced production technologies and fully automated production lines, we reliably supply high-quality products to customers worldwide.

Haipu Production Bases (Huainan, China)

3.6 Customer Testimonials

Haipu product portfolio and solutions are widely applied across multiple sectors, covering over 100 segmented application scenarios.

Lithium Extraction from Salt Lakes

Haipu is the **world's first enterprise** to achieve industrial application of both aluminum-based and titanium-based adsorbents for lithium extraction. We have established project collaborations with leading enterprises such as Zijin Mining and SDIC Luobupo Potash Co., Ltd.

Lithium Battery Recycling

Haipu pioneered cutting-edge technologies including high-precision silicon removal, fluoride removal, aluminum removal, zero-pollution oil removal, and boron removal from ternary feed solutions. Strategic partnerships have been formed with industry leaders like BYD, Ganfeng Lithium, and Huayou Cobalt.

Hydrometallurgy

Haipu enables the green and high-quality extraction of non-ferrous metals (e.g., copper, nickel) and precious metals (e.g., gold), breaking through key industry technical bottlenecks. We have also developed innovative products and solutions for the extraction of metals such as tungsten, vanadium, gallium, rhenium, rubidium, and cesium.

To date, Haipu has established cooperative relationships with representative enterprises across industries, including Zijin Mining, PetroChina, Sinopec, CNNC, SDIC Luobupo Potash, and BYD. Additionally, we maintain industry-university-research partnerships with prestigious academic institutions such as Nanjing University and Soochow University.

Haipu has always won the trust and long- term cooperation of high- quality customers from various industries with excellent service quality and profound industry experience.We deeply understand that every service is not only the delivery of a task, but also the entrustment of trust.For this reason, we always put quality first, strive for excellence, and continue to exceed customer expectations.

The company’s professionalism and service quality have been recognized by authoritative institutions, and it has been awarded the **Brand Reputation Index Evaluation Certificate**.

Against the backdrop of sweeping industrial transformation, new-quality productivity has emerged as the core engine driving societal progress. Haipu keenly grasps the pulse of the times, with ‘Driving new-quality productivity through material innovation’ as its core philosophy, integrating technological innovation deeply into the enterprise’s DNA.

We firmly believe that breakthroughs in basic materials are the source of vitality for industrial upgrading. Therefore, we focus on the fields of separation, purification, and synthetic carrier new materials, committed to empowering partners and injecting strong momentum into industrial upgrading through disruptive material solutions!